

In the Claims

1. (Previously presented) A method for providing point-to-multipoint services in a radio communication system, the method comprising:

performing Internet protocol header compression to form header compressed data; and

transmitting the header compressed data in at least one of a point-to-point manner and a point-to-multipoint manner depending upon a threshold value, to one or more users of the radio communication system,

wherein the Internet protocol header compression is performed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein the point-to-multipoint service is a multimedia broadcast/multicast service (MBMS) and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

2. (Original) The method of claim 1, wherein the point-to-point manner is employed if a total number of users within a cell is below the threshold value.

3. (Original) The method of claim 1, wherein the point-to-multipoint manner is employed if a total number of users within a cell is at or above the threshold value.

4. (Previously presented) The method of claim 1, wherein the Internet protocol header compression is respectively performed for each type of MBMS service to be provided.

5. (Original) The method of claim 1, wherein the point-to-point manner is transmitting data from a single sending point to a single receiving point.

6. (Original) The method of claim 5, wherein the point-to-point manner is based upon a total number of users within a cell of the radio communication system.

7. (Canceled)

8. (Previously presented) The method of claim 6, wherein the transmitting by point-to-point manner is via a dedicated channel.

9. (Original) The method of claim 1, wherein the point-to-multipoint manner is transmitting data from a single sending point to multiple receiving points.

10. (Original) The method of claim 9, wherein the point-to-multipoint manner is based upon a total number of users within a cell of the radio communication system.

11. (Canceled)

12. (Previously presented) The method of claim 10, wherein the transmitting by point-to-multipoint manner is via a common channel.

13. (Previously presented) The method of claim 1, wherein the header compression is performed at a central location for each type of MBMS service.

14-15. (Canceled)

16. (Previously presented) The method of claim 1, wherein the MBMS service is a service that is provided to a specified plurality of users.

17. (Canceled)

18. (Previously presented) A method of receiving data of a point-to-multipoint service in a radio communication system, the method comprising:

receiving header compressed data in at least one of a point-to-point manner and a point-to-multipoint manner depending upon a threshold value; and

decompressing the received header compressed data to allow a user to access the point-to-multipoint service,

wherein the header compressed data is formed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein the point-to-multipoint service is a multimedia broadcast/multicast service (MBMS) and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

19. (Original) The method of claim 18, wherein the point-to-point manner is receiving data by a single receiving point from a single sending point.

20. (Original) The method of claim 19, wherein the point-to-point manner is based upon a total number of users within a cell of the radio communication system.

21. (Original) The method of claim 19, wherein the receiving by point-to-point manner is via a dedicated channel.

22. (Original) The method of claim 18, wherein the point-to-multipoint manner is receiving data by multiple receiving points from a single sending point.

23. (Original) The method of claim 22, wherein the point-to-multipoint manner is based upon a total number of users within a cell of the radio communication system.

24. (Original) The method of claim 22, wherein the receiving by point-to-multipoint manner is via a common channel.

25. (Previously presented) The method of claim 18, wherein the MBMS service is a service that is received by a specified plurality of users.

26-27. (Canceled)

28. (Previously presented) In a radio communication system for providing and receiving data of a point-to-multipoint service, a radio network controller comprising:

a header compressing portion that performs Internet protocol header compression to form header compressed data; and

a transmitting portion, operatively connected with the header compressing portion, that transmits the header compressed data in at least one of a point-to-point manner and a point-to-multipoint manner depending upon a threshold value, to one or more users of the radio communication system,

wherein the Internet protocol header compression is performed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein the point-to-multipoint service is a multimedia broadcast/multicast service (MBMS) and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

29. (Canceled)

30. (Previously presented) The radio network controller of claim 28, wherein the PDCP entity respectively performs header compression for each type of MBMS service to be provided.

31. (Canceled)

32. (Original) The radio network controller of claim 31, wherein the SRNC transmits via a dedicated transport channel.

33. (Canceled)

34. (Original) The radio network controller of claim 33, wherein the CRNC transmits via a common transport channel.

35. (Previously presented) In a radio communication system for providing and receiving data of a point-to-multipoint service, a user equipment comprising:

a receiving portion, that receives in at least one of a point-to-point manner and a point-to-multipoint manner, Internet protocol header compressed data; and

a header decompressing portion operatively connected with the receiving portion, the header decompressing portion decompressing the header compressed data to access the point-to-multipoint service,

wherein the header compressed data is formed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein the point-to-multipoint service is a multimedia broadcast/multicast service (MBMS) and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

36-38. (Canceled)

39. (Previously presented) The user equipment of claim 35, wherein the receiving portion receives via a dedicated transport channel.

40. (Canceled)

41. (Previously presented) The user equipment of claim 35, wherein the receiving portion receives via a common transport channel.

42. (Previously presented) A method for providing point-to-multipoint services in a radio communication system, the method comprising:

performing Internet protocol header compression to form header compressed data; and

transmitting the header compressed data in at least one of a point-to-point manner and a point-to-multipoint manner according to a type of point-to-multipoint service to one or more users in the radio communication system,

wherein the Internet protocol header compression is performed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein the point-to-multipoint service is a multimedia broadcast/multicast service (MBMS) and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

43-50. (Canceled)

51. (Previously presented) A method of providing Internet protocol header information to a plurality of terminals in a wireless communication system, the method comprising:

performing header compression of Internet protocol header information to form compressed header data; and

transmitting the compressed header data to at least one terminal of the communication system in at least one of a point-to-point manner and a point-to-multipoint manner depending upon a threshold value,

wherein the header compression of Internet protocol header information is performed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein a multimedia broadcast/multicast service (MBMS) is provided to the plurality of terminals and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

52. (Previously presented) The method of claim 51, wherein the header compression is performed once for the data transmitted to the plurality of terminals when the data is transmitted in the point-to-multipoint manner.

53. (Previously presented) The method of claim 51, wherein the compressed header data is provided to the plurality of terminals when the data is transmitted in the point-to-multipoint manner.

54. (Previously presented) The method of claim 51, wherein the threshold value is associated with a number of terminals.

55. (Previously presented) The method of claim 51, wherein the compressed header data is transmitted to the at least one terminal using a common channel.

56. (Previously presented) The method of claim 51, wherein at least part of the Internet protocol header information is not compressed.

57-70. (Canceled)

71. (Previously presented) A wireless communication system for providing Internet protocol header information to a plurality of terminals, the wireless communication system comprising:

a header compression module adapted to receive Internet protocol header information from an internet protocol module and compress the internet protocol header information to form compressed header data;

a transmitting module adapted to transmit the compressed header data to at least one user of the communication system in at least one of a point-to-point manner and a point-to-multipoint manner depending upon a threshold value; and

a receiving module adapted to receive and decompress the compressed header data,

wherein the header compression of Internet protocol header information is performed in a packet data convergence protocol (PDCP) entity located within a serving radio network controller (SRNC) in case of the point-to-point manner and within a controlling radio network controller (CRNC) in case of the point-to-multipoint manner,

wherein a multimedia broadcast/multicast service (MBMS) is provided to the plurality of terminals and one PDCP entity exists in the CRNC for each MBMS service in case of the point-to-multipoint manner.

72. (Previously presented) The wireless communication system of claim 71, wherein the compressed header data is provided to the plurality of terminals when the data is transmitted in a point-to-multipoint manner.

73. (Canceled)

74. (Previously presented) The wireless communication system of claim 71, wherein the compressed header data is transmitted in the point-to-point manner if the number of terminals is below the threshold value.

75. (Previously presented) The wireless communication system of claim 71, wherein the compressed header data is transmitted in the point-to-multipoint manner if the number of terminals is at or above the threshold value.

76-80. (Canceled)